UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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EQUAL EMPLOYMENT OPPORTUNITY COMMISSION,

Plaintiff,

-against-

BLOOMBERG L.P.,

Defendant.
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07-CV-8383 (LAP)(HBP)

JILL PATRICOT, TANYS LANCASTER, JANET LOURES, MARINA KUSHNIR, MONICA PRESTIA, and MARIA MANDALAKIS,

Plaintiff-Intervenors,

-against-

BLOOMBERG L.P.,

Defendant.
----------x

ORAL ARGUMENT REQUESTED

MEMORANDUM OF LAW IN SUPPORT OF PLAINTIFF EEOC'S MOTION TO EXCLUDE THE EXPERT OPINIONS OF DR. MICHAEL P. WARD AND DR. JOHN H. JOHNSON, IV

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PLAINTIFF EEOC'S MOTION TO EXCLUDE THE EXPERT OPINIONS OF DR. MICHAEL P. WARD AND DR. JOHN H. JOHNSON, IV

Pursuant to Federal Rules of Evidence 403 and 702, as well as *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), and its progeny, Plaintiff Equal Employment Opportunity Commission ("EEOC") moves to exclude all testimony and reports of Michael P. Ward, Ph.D. and John H. Johnson, IV, Ph.D., Defendant Bloomberg L.P.'s ("Bloomberg's") two proposed labor economist experts. Specifically, both experts' analyses should be excluded because (1) they fail to assist the jury in answering the basic question for the fact-finder in this case: are pregnant women and mothers at Bloomberg discriminated against based on their sex/pregnancy? and (2) they fail to apply their methodologies regarding the effect of leave-taking on Bloomberg employees' compensation reliably to the facts of this case. In the alternative, only one of Defendant's labor economist experts should be allowed to testify, since the opinions and proposed testimony of both experts would be needlessly cumulative and are therefore inadmissible under Fed. R. Evid. 403.

BACKGROUND

EEOC alleges, *inter alia*, that Bloomberg L.P. ("Bloomberg") has engaged in a pattern or practice of sex/pregnancy discrimination from approximately February 2002 through the present, by awarding class members less compensation, demoting class members, diminishing class members' responsibilities, and discriminating against class members in other terms, conditions, or privileges of employment. The class is defined to include female employees who became pregnant and/or returned from maternity leave during the relevant time period. In support of its allegations, EEOC retained Louis R. Lanier, Ph.D. to conduct statistical analyses. Simultaneously, Defendant retained Drs. Ward and Johnson to conduct affirmative statistical analyses and to rebut the analyses of Dr. Lanier. These experts all wrote initial reports, Drs.

Lanier and Ward wrote rebuttal reports, and all three experts wrote reply reports. (See Declaration of Raechel L. Adams in Support of Plaintiff EEOC's Motion To Exclude the Expert Opinions of Dr. Michael P. Ward and Dr. John H. Johnson, IV ("Adams Decl.") ¶¶ 2-8, 10-11.) Dr. Ward then submitted a "Sur-Sur-Reply Report." (Adams Decl. ¶ 9.)[1] In addition, Drs. Lanier and Ward were each deposed three times on their respective reports, and Dr. Johnson was deposed twice. (See Adams Decl. ¶¶ 12-14.)

All three statistical experts focused their analyses primarily on compensation, due to the insufficiency of Bloomberg data relating to EEOC's other allegations.[2] Dr. Lanier studied base salary, intended value of Equity Equivalency Certificates ("EECs") granted in a particular year,

[1] Dr. Ward's "Sur-Sur-Reply" to Dr. Lanier's Corrected Reply Report was submitted on March 29, 2010, ostensibly pursuant to this Court's Order of March 15, 2010. This report, attached as Exhibit H to Adams Decl.) goes far beyond the spirit, if not the letter, of the Court's Order, which allowed Bloomberg to submit a report to address the corrections Dr. Lanier made in his Corrected Reply Report. In Dr. Ward's "Sur-Sur-Reply," one paragraph on page 1, one paragraph on page 3, two lines from the Conclusion section on page 10, and the corrected tables in Appendix A are the only portions that address Dr. Lanier's corrections. The rest of Dr. Ward's 23-page report criticizes the methodology Dr. Lanier used in his original reply report and thus function as a sur-reply to Dr. Lanier's original reply report, something Bloomberg never had the right to submit. EEOC strongly objects to how Bloomberg circumvented the agreed-upon and Court-ordered expert discovery schedule in this case. Nevertheless, EEOC refrains from burdening the Court with further motions to strike and instead articulates its arguments against Dr. Ward's opinions in this motion.

[2] Both Dr. Lanier and Dr. Ward did attempt to perform some partial analysis relating to EEOC's demotion allegations (see Adams Decl. ¶ 2, Exh. A, at ¶¶ 36-38; Adams Decl. ¶ 6, Exh. E, at 16-18), but as Dr. Ward and Dr. Johnson testified, a full-blown statistical analysis is impossible given Bloomberg's inconsistent and insufficient data. (See Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 157-58; 434-38; Adams Decl. ¶ 14, Exh. M (Johnson Dep.) at 64-65, 76-78; Adams Decl. ¶ 10, Exh. I, at n.8) Additionally, although the class includes pregnant employees who have not yet taken maternity leave, all three statistical experts were constrained by Bloomberg's data, which does not track pregnancy; therefore, all three experts only analyzed the compensation of class members with identifiable maternity leaves. (See Adams Decl. ¶ 2, Exh. A, at ¶¶ 5, 7-8; Adams Decl. ¶ 6, Exh. E, at 7, 9; Adams Decl. ¶ 10, Exh. I, at ¶ 15; Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 105-06; Adams Decl. ¶ 14, Exh. M (Johnson Dep.) at 124.)

and the combined "total intended compensation"[3] of class members and *compared these compensation outcomes to compensation outcomes for all non-class members* between January 1, 2002 and December 31, 2008. (Adams Decl. ¶ 2, Exh. A, at ¶ 5; Adams Decl. ¶ 4, Exh. C, at ¶ 19.) He controlled for many employment-related factors, including the duration of various types of leave the employees took, so as to compare compensation of similarly-situated employees and determine whether any disparities could be due to discrimination. Drs. Ward and Johnson studied the compensation of class members *versus the compensation of other employees who took leave*. Because Drs. Ward and Johnson studied the wrong question, and did even that with flawed methodology, their opinions in this case should be excluded.

Dr. Lanier's Statistical Methods and Results

Dr. Lanier used regression analyses to examine the annual base pay (salary) rate changes and EEC grants for class members compared to non-class members. (See Adams Decl. ¶ 2, Exh. A, at ¶¶ 22-24.) Regression analyses provide a means for exploring the relationship between a dependent variable (such as compensation change) while "controlling" for the influences of other factors. (*Id*. at ¶ 11.) Dr. Lanier initially found that class members received lower base pay rate increases and lower EEC grants than non-class members when he compared employees in the same year, in the same business unit, with the same amount of company tenure and pre-Bloomberg experience, and who were paid the same base pay and EEC grants in the previous year. (See *id*. at Tables 1 and 2.) These results were statistically significant at more than two

[3] EEC's have an "intended" value at the time of award based on projected sales figures, and a "locked-in" value one year later. EECs are paid out to employees at the EECs' locked-in value two years from the award date. "Total intended compensation," therefore, refers to an employee's base salary for the upcoming year, awarded on the employee's anniversary date, plus the total intended value of the EECs awarded to the employee on or around that same anniversary date. (See Adams Decl. ¶ 6, Exh. E, at 4; Adams Decl. ¶ 2, Exh. A, at ¶ 21.)

standard deviations, which means that there is a less than 5% probability that the results could have occurred by random chance. (See *id.*)

When Dr. Lanier modified his analyses to control for the amount of time each employee was out on leave, he still found statistically significant class-related disparities in total intended compensation, base salary, and intended EEC grants. (See Adams Decl. ¶ 5, Exh. D, at ¶¶ 6-15.) Indeed, Dr. Lanier's corrected Table 0 shows that on average, class members received a 1.17% lower total intended compensation increase than similarly-situated non-class members receiving compensation changes in the same year, in the same business unit, with the same amount of company tenure and pre-Bloomberg labor force experience, who were previously paid the same total intended compensation and EEC grants, and who took the same amount of leave in the previous year. (See *id.* at Table 0 (corr.).) Dr. Lanier found similar class disparities in base pay (0.92% lower base pay rate increases) and EEC grants ($1,399 lower intended EEC grants), using the same controls. (See *id.* at Table 1 (corr.) and Table 2 (corr.).) Dr. Lanier's results are statistically significant at 3.08 standard deviations for total intended compensation changes, 4.5 standard deviations for base pay rate changes, and 2.40 standard deviations for EEC grants (the higher the standard deviations, the lower the probability the result could have occurred by random chance). (See *id.* at Tables 0-2 (corr.).)

Dr. Lanier found that maternity leave had a different effect on pay outcomes than non-maternity leave did, and he modified his regression analyses to take that difference into account when he compared compensation growth for class members against compensation growth for non-class members.[4] (See Adams Decl. ¶ 4 Exh. C at ¶ 20-23.) Thus, Dr. Lanier's analysis is

[4] Although some class members also took some leave for reasons other than maternity (as identified in Defendant's data), such leave reasons are not always clear from the data and on average, these leaves are much shorter than the class members' maternity leaves. (See Adams

the only analysis in this case that isolates (or attempts to distinguish) a "leave effect" (that is, the effect of compensation changes that are related to being on leave and out of the office) from a "class effect" (that is, the effect of compensation changes that are related to being a class member who was pregnant and took maternity leave and that are unrelated to leave-taking). (See Adams Decl. ¶ 3, Exh. B, at ¶ 6; see also Adams Decl. ¶ 4, Exh. C, at ¶ 20-23; Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 405; Adams Decl. ¶ 14, Exh. M (Johnson Dep.) at 328.)

Dr. Ward's Statistical Methods and Results

Dr. Ward also used regression analyses, and he studied the growth in total intended compensation (base salary plus intended value of EECs granted in a particular year) of Bloomberg employees over differing periods of time for different employees, depending on when they took the leave. (See Adams Decl. ¶ 6, Exh. E, at 11-16.) Dr. Ward controlled for employee age, year of hire, and the years over which compensation growth was measured. (See *id*. at 12.)

Using only those "base controls" but dividing up his results into various "leave-taker" comparison groups, Dr. Ward found statistically significant lower compensation growth for class members compared to non-class members who took no leave or who took leaves shorter than 60 days. (*Id*. at 13.) He found that class members had slightly higher compensation growth than non-class members who took leaves longer than 60 days, but this result was not statistically significant. (See *id*.) Dr. Ward then included a single leave duration control in his statistical model, whereby he added together the durations of each employee's leaves, regardless of: (1) when the leave was taken within Dr. Ward's overall study period (January 1, 2001 – December 31, 2008) (see Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 392), (2) whether the leave was a

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Decl. ¶ 6, Exh. E, at Exhibit 2; Adams Decl. ¶ 8, Exh. G, at n. 9; Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 370; Adams Decl. ¶ 14, Exh. M (Johnson Dep.) at 443-44.)

maternity leave or some other type of leave (see Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 123-25, 405) and (3) the number of separate leaves taken by each employee during the overall study period. (See Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 383-86.)

When Dr. Ward ran his analyses with his leave duration control, he found that compensation growth was somewhat higher for class members than for non-class members who took short or long leaves, and still somewhat lower for class members than for non-class members who took no leave. (See Adams Decl. ¶ 6, Exh. E, at 13-14, Exhibit 5.) Based on these results, Dr. Ward concluded that "[r]elative to employees who took some leave for reasons other than maternity, on average the Class Members had somewhat higher than expected growth in intended compensation given the amount of time they were on leave during the Study Period." (*Id*. at 14.)

It is highly significant that Dr. Ward used only one leave duration control in his regression analysis for all types of leave regardless of (1) when the leave was taken within his overall study period, (2) whether the leave was a maternity leave or some other type of leave, or (3) the number of separate leaves taken during the overall study period, because he thereby assumes that the duration of all types and lengths of leave, taken at any point, has the same effect on pay. (See Adams Decl. ¶ 3, Exh. B, at ¶¶ 29-34.) As discussed below, the effect leave has on pay is actually different for class members than it is for non-class members. Relatedly, by failing to account for the timing of leave and the number of leaves an individual has taken within the overall study period, Dr. Ward is unable to isolate (differentiate) a compensation effect due to leave from a compensation effect due to other factors such as class status. (See *id*.) Dr. Ward's focus on a leave effect to the exclusion of other compensation effects prevents him from

analyzing properly or reliably the differences in compensation as between class members and non-class members.

Dr. Johnson's Statistical Methods and Results

Like Dr. Ward, Dr. Johnson also purports to study the effect of leave-taking on compensation (although unlike Dr. Ward, Dr. Johnson studies base salary and intended value of EEC grants separately and conducts no analysis of employees' combined total intended compensation). (See Adams Decl. ¶ 10, Exh. I, at ¶ 16; Adams Decl. ¶ 14, Exh. M (Johnson Dep.) at 65-66, 75.) Using a different construct than Dr. Ward, Dr. Johnson studied several "scenarios" in which he compared compensation at a point before an employee's leave to a point after the employee's leave (described in more detail below). (Adams Decl. ¶ 10 Exh. I, at ¶ 17; Adams Decl. ¶ 11 Exh. J, at ¶¶ 21, 23-24.) Significantly, in Dr. Johnson's scenarios, the "after" period never ends more than two years after a leave. (See Adams Decl. ¶ 11 Exh. J, Exhibit 29.) As a result, Dr. Johnson studied only compensation effects occurring, in his own words, "immediately" after a leave, and he ignored the pay outcomes that lay outside of his narrow study periods. (Adams Decl. ¶ 14, Exh. M (Johnson Dep.) at 367-68.) Like Dr. Ward, Dr. Johnson thus failed to account for factors such as class status that affect compensation. Also like Dr. Ward, Dr. Johnson used only one leave duration control for both maternity leaves and other types of leave. (See *id*. at 328.) For these reasons, Dr. Johnson's analyses are unreliable and fail to assist the fact-finder in determining whether Defendant discriminates against pregnant women and mothers.

As for Dr. Johnson's scenarios, Scenario 1 studied class members' compensation growth from a point "twelve months before six months before" the ***birth*** of the class member's child to a point twelve months after the class member returns from leave. (Adams Decl. ¶ 10, Exh. I, at ¶

17.) Dr. Johnson studied the same for non-class members, except that since non-class members have no birth dates by which to measure the "before" period, he studied non-class members' compensation from a point twelve months before they went out on ***leave*** to a point twelve months after they returned from leave. (*Id*. at ¶ 17 n.10.) Dr. Johnson concluded that class members' base salary increased by an average of 10.4% between the point eighteen months before the class member's child's birth and the end of the twelve-month period following each maternity leave. (*Id*. at ¶ 19.) Dr. Johnson compared this 10.4% increase to the compensation increases for female non-class members and all non-class members, but as to these comparison groups, he used a narrower time period - the before and after points of ***twelve*** months before the non-class members took leave and twelve months after they returned from leave. (See *id*. at ¶ 17 n.10, ¶ 20; Exhibit 2.) He constructed the same comparison periods and found similar results in his EEC grant analyses. (See Adams Decl. ¶ 10, Exh. I, at ¶¶ 30-32; Adams Decl. ¶ 11, Exh. J, at ¶¶ 23-24.)

Most of Dr. Johnson's analyses simply compared compensation outcomes for class members and other leave-takers without using any regression analyses. (Adams Decl. ¶ 10 Exh. I, at ¶¶ 18-32.) When he did use regression analysis, he added a control for gender in all of his regressions. (Adams Decl. ¶ 14 Exh. M (Johnson Dep.) at 156-57, 207, 324-25.) Dr. Johnson's use of a gender control is inappropriate because it prevents him from properly comparing compensation outcomes for class members (who are all female) to non-class members (who are both male and female). (See Adams Decl. ¶ 3 Exh. B, at ¶ 16.)

ARGUMENT

I. Dr. Ward's and Dr. Johnson's Opinions and Testimony Are Inadmissible Under Fed. R. Evid. 702 and *Daubert* and Its Progeny

As a general matter, expert testimony is admissible only if: (1) the testimony will assist the trier of fact; (2) the testimony is based upon sufficient facts or data; (3) the testimony is the product of reliable principles and methods; and (4) the witness has applied the principles and methods reliably to the facts of the case. Fed. R. Evid. 702. It is well established that the proponent of expert testimony has the burden of establishing that the testimony satisfies the requirements of Rule 702. *See United States v. Williams*, 506 F.3d 151, 160 (2d Cir. 2007). The Supreme Court's decision in *Daubert* made clear that the district judge must act as a "gatekeeper" to ensure that expert testimony is both relevant (*i.e.*, helpful to the trier of fact) and reliable. 509 U.S. at 589. In determining whether proposed expert evidence meets the standards under Rule 702, the Court must determine: (1) whether the witness is qualified to be an expert; (2) whether the opinion is based upon reliable data and methodology; and (3) whether the expert's testimony on a particular issue will assist the trier of fact. *See Nimely v. City of N.Y.*, 414 F.3d 381, 397 (2d Cir. 2005).

Here, EEOC does not challenge Dr. Ward's or Dr. Johnson's qualifications, or the reliability of the compensation data underlying their reports. Further, to the extent both experts used multiple regression analyses, EEOC does not challenge the reliability of that general methodology. (EEOC does, however, challenge Dr. Johnson's general methodology to the extent he presents uncontrolled, descriptive analyses in Exhibits 2, 3, 5, 6 of his initial report and 20 of 50 result tables in his reply report.) Yet, both defense experts employed flawed methodology that is unreliably applied to this case, and neither expert will assist the trier of fact. Thus, their analyses and conclusions do not meet the admissibility standard.

A. Drs. Johnson and Ward Will Not Assist the Fact-Finder Because They Study the Wrong Question

"Even after determining that a witness is 'qualified as an expert' to testify as to a particular matter, Fed. R. Evid. 702, and that the opinion is based upon reliable data and methodology, Rule 702 requires the district court to make a third inquiry: whether the expert's testimony (as to a particular matter) will 'assist the trier of fact.'" *Nimely*, 414 F.3d at 397. Further, "expert testimony which does not relate to any issue in the case is not relevant and, ergo, non-helpful [to the trier of fact]." *Daubert*, 509 U.S. at 591 (quoting 3 Weinstein & Berger P 702[02], at 702-18); *see also Holowecki v. FedEx*, 644 F. Supp. 2d 338, 361 (S.D.N.Y 2009) (statistical evidence excluded under Fed. R. Evid. 702 because, *inter alia*, "statistics concerning the national retirement rate are immaterial to the question presented here, *viz.*, whether FedEx treats its employees in an age-neutral fashion, and whether its employment practices — even if facially neutral — have a significantly discriminatory impact on a protected group.")

In this pattern or practice case, EEOC has the initial burden to show that the class was discriminated against based on sex/pregnancy and can introduce statistical evidence as part of its proof. *See, e.g., Bazemore v. Friday*, 478 U.S. 385, 400 (1986). In disparate treatment cases, "plaintiffs typically use multiple regression analysis to isolate the influence of [the protected trait] on employment decisions relating to a particular job or job benefit, such as salary." *Ottaviani v. State Univ. of New York*, 875 F.2d 365, 366-367 (2d Cir. 1989).

Drs. Ward and Johnson both conducted analyses of the impact of ***leave*** on the compensation of Bloomberg employees, and not the impact of class status (*i.e.*, being pregnant and/or having returned from maternity leave within the relevant time period). (Adams Decl. ¶ 3, Exh. B, at ¶ 6; Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 22-24; Adams Decl. ¶ 14 Exh. M (Johnson Dep.) at 289, 328.) Yet, the question of how a leave of absence affects compensation

at Bloomberg is not the question the fact-finder must answer in this case. Indeed, according to Bloomberg policy, managers are not permitted to take leaves of absence into account when deciding employee compensation. (Adams Decl. ¶ 15, Exh. N (Cooper 9/8/08 30(b)(6) Dep.) at 99-100.) Rather, the ultimate question the jury will be asked to decide as to EEOC's compensation allegation is: Have class members who are pregnant or new mothers been discriminated against in compensation at Bloomberg, as compared to employees who are not pregnant or new mothers?[5] Because Drs. Ward and Johnson fail to study this question, their analyses and opinions should be excluded as irrelevant to the question the fact-finder will decide.

B. Drs. Ward and Johnson Do Not Reliably Apply Their Methodologies to the Facts of This Case

"When an expert opinion is based on data, a methodology, or studies that are simply inadequate to support the conclusions reached, *Daubert* and Rule 702 mandate the exclusion of that unreliable opinion testimony." *Amorgianos v. Nat'l R.R. Passenger Corp.*, 303 F.3d 256, 266 (2d Cir. 2002). Pursuant to the Second Circuit's holding in *Amorgianos*, this Court must review the facts of this case and determine whether Drs. Ward and Johnson applied their methodologies reliably to those facts:

> In deciding whether a step in an expert's analysis is unreliable, the district court should undertake a rigorous examination of the facts on which the expert relies, the method by which the expert draws an opinion from the facts, and how the expert applies the facts and methods to the case at hand.

Id. A court should exclude expert evidence "if the flaw [in an expert's reasoning] is large enough that the expert lacks 'good grounds' for his or her conclusions.'" *Id*. (citations omitted). The expert's opinion in *Amorgianos* "rested on a faulty assumption due to his failure to apply his

[5] Indeed, Dr. Ward acknowledged in his deposition that unlike himself, Dr. Lanier treats "this like a typical discrimination case" by comparing how Defendant treats the class to how it treats non-class members. (Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 57.)

stated methodology 'reliably to the facts of the case.'" *Id*. at 269; *see also Holowecki*, 644 F. Supp. 2d at 360 (statistical analysis based on assumptions that are factually incorrect are insufficiently reliable to be admissible under Fed. R. Evid. 702); *Baker v. Urban Outfitters, Inc.*, 254 F. Supp. 2d 346, 355 (S.D.N.Y. 2003) (expert report that calculated damages based on a pricing method not relevant to the product in question was inadmissible because the expert did not apply principles and methods reliably to the facts of the case).

"To warrant admissibility…it is critical that an expert's analysis be reliable at every step . . . [and] any step that renders the analysis unreliable under the *Daubert* factors renders the expert's testimony inadmissible." *Amorgianos*, 303 F.3d at 267. In *Holowecki*, 644 F. Supp. 2d at 360-61, the statistical expert improperly assumed that all FedEx employees who were hired in a particular job retired while still in that same job, when in fact there was undisputed evidence that several employees changed jobs during their career. Because the expert's statistical analysis was based on this improper assumption, the court ruled it insufficiently reliable to be admissible under Fed. R. Evid. 702. *Id*. Similarly, in *Amorgianos*, 303 F.3d at 268, the expert testified that a proper chemical exposure assessment should consider certain variables, but did not actually consider those variables when conducting his studies for the case. 303 F.3d at 268. In light of this failure to apply the proper methodology, the Second Circuit affirmed the District Court's decision to exclude the expert's opinion as unreliable.

"The impact from the exclusion of a relevant variable can be significant. 'Failure to include a major explanatory variable that is correlated with the variable of interest in a regression model may cause an included variable to be credited with an effect that actually is caused by the excluded variable.'" *Freeland v. AT&T*, 238 F.R.D. 130, 148 (S.D.N.Y. 2006) (quoting Federal Judicial Center, *Reference Manual on Scientific Evidence*, at 188 (2d ed. 2000)). "By failing to

include an independent variable for quality in his regression analysis, [the expert] cannot be sure that he is measuring true price changes." *Id.* at 148-49; *see also Bickerstaff v. Vassar College*, 196 F.3d 435, 449 (2d Cir. 1999) (affirming the lower court's finding that the statistical evidence had no probative value because the "regression[] [was] so incomplete as to be inadmissible as irrelevant.") (quoting *Bazemore*, 478 U.S. at 400 n.10).

In the instant case, both defense experts studied a "leave effect" but Dr. Ward attributed all pay outcomes to leave-taking without considering other factors, and Dr. Johnson attributed all pay outcomes to leave-taking because he only studied compensation decisions that took place immediately following the leave. Additionally, one of EEOC's primary claims in this matter is that class members were no longer seen by Defendant as committed to Bloomberg after they returned from leave because they had small children to raise. Yet both defense experts completely fail to study whether a class member continues to suffer effects of sex/pregnancy discrimination long after she returns from maternity leave. In sum, by using only one leave duration variable, both experts exclude a major consideration (variable) from their analyses. Thus, their analyses only study part of the story, and these flaws in their methodologies render their results unreliable and inadmissible under Fed. R. Evid. 702.

In addition, Dr. Johnson constructed confusing "scenarios" to compare class member compensation outcomes to other leave-taker compensation outcomes, one of which compareed the two groups for two totally different time periods. Furthermore, Dr. Johnson's regression analyses incorporated a gender control, which skewed his results and further detracts from the reliability of his analysis. Finally, Dr. Johnson's descriptive, uncontrolled statistics are essentially worthless because they did not control for any variables that would allow Dr. Johnson to compare similarly-situated employees, as required in a Title VII case where statistical experts

present comparative analysis. For all of these reasons, both experts' opinions should be excluded as inadmissible.

1. Dr. Ward's Regression Analyses and Opinions Are Not Applied Reliably to the Facts in This Case

Dr. Ward's erroneous assumptions and flawed methodology render his analyses unreliable and inadmissible. He incorrectly defined a total effect on compensation as a pure "leave effect." This is evident from three failures in his methodology: (1) he failed to study the impact of maternity leave on the compensation of class members separately from the impact of non-maternity leave on the compensation of non-class members, (2) he failed to account for the passage of time between the leave endpoint and the end of the study period, and (3) he treated multiple short leaves as having the same effect on compensation as one long leave. (See Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 123-25, 383-86, 392, 405.)

First, by including only one leave duration variable, Dr. Ward assumed that any difference in the compensation of class members compared to the compensation of non-class members was due entirely to the effect of taking leave. (See Adams Decl. ¶ 3, Exh. B at ¶ 6; Adams Decl. ¶ 4, Exh. C at ¶ 4; Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 123-25; 405.) In his initial report, Dr. Ward himself acknowledged that "the key test is whether maternity leaves have a larger or smaller effect than other kinds of leave," and he claimed to measure the impact on compensation of maternity leaves contrasted with the impact of non-maternity leaves. (Adams Decl. ¶ 6, Exh. E, at 3, Exhibit 5.) Indeed, in his initial report, Dr. Ward found that "among Class Members, compensation growth was positively related to the percentage of leave time that was maternity leave." (*Id*. at 14.) Yet, Dr. Ward then surprisingly failed to apply his own hypothesis. Dr. Lanier, who took the time to investigate Dr. Ward's hypothesis that maternity leaves affect compensation differently than other types of leave do, conducted further regression

analysis and confirmed in his reply report that there is indeed a difference between the effect on compensation of maternity leaves and the effect on compensation of non-maternity leaves. (Adams Decl. ¶ 4, Exh. C, at ¶¶ 20, 22.) This caused Dr. Lanier to add to his statistical model a mechanism for isolating different leave effects on compensation from a class effect on compensation. (See *id*.)

Dr. Ward does not present an analysis that measures whether the impact of taking leave is different for class members' compensation than the impact of taking leave is for non-class members' compensation, even though he himself found that the leave affects class members' pay differently than it does non class members' pay. Indeed, rather than modifying his initial model to address Dr. Lanier's criticism that he used only one leave duration control for all types of leave, he inexplicably stated in his reply report that "there is no statistical basis for separate treatment of maternity and non-maternity leaves." (Adams Decl. ¶ 8, Exh. G, at 10.) This statement is inaccurate, as well as disingenuous considering that Dr. Ward's own initial analyses demonstrated the difference between the effect on pay of a maternity leave and the effect on pay of a non-maternity leave in the first place. (See Adams Decl. ¶ 6, Exh. E, at 14.)

Second, Dr. Ward measured compensation changes that span different amounts of time after employees return from leave, but he did not sufficiently account for the fact that the pay endpoint he studied may occur shortly after an employee returns from leave or several years after the employee returns from leave – or at any point in between. (See Adams Decl. ¶ 3, Exh. B, at ¶¶ 29-32; Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 392). In other words, Dr. Ward assumed that a maternity leave that ended in 2003 will have the same effect on a pay decision in 2008 that a maternity leave that ended in 2007 would have on a pay decision in 2008. (See Adams Decl. ¶ 3, Exh. B, at ¶ 32). A labor economist would not expect that an employee's leave would, on its

own, continue to affect her pay in the same manner some five or six years after she returned from leave, but Dr. Ward assumed it would. (See *id*. at ¶ 31.)[6]

Third, Dr. Ward failed to explore the implications of his single leave duration variable as he did not account for when the leave(s) occurred within the study period. (Lanier Dep. at 249-53.) Because Dr. Ward's leave duration variable represents a sum of the durations of all leaves taken within the study period, it can encompass multiple short leaves or one long leave for a given individual. (*Id.*) Dr. Ward would unquestionably have reached different results had he accounted for differing compensation effects depending on the number and timing of the leaves in his statistical model. (*Id.*)

A proper comparison of class members to non-class members must take into account that different types of leave have different effects on compensation, that factors other than leave also influence compensation, and that the timing of leave influences compensation. Because Dr. Ward's analyses do none of these, they are not reliably applied to the facts in this case and will not be helpful to the fact-finder. These flaws in Dr. Ward's analysis are fundamental enough to demonstrate that Dr. Ward lacks "good grounds" for his conclusions and those conclusions should therefore be excluded. *Amorgianos*, 303 F.3d at 267 (citations omitted).

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[6] Further, the manner in which Dr. Ward addressed criticism relating to the distance between the leave and the pay endpoint Dr. Ward studied was overly simplistic and failed to correct the problem. Rather than addressing Dr. Lanier's criticism directly, all Dr. Ward did in the "modified" studies reported in Table 4 of Ward III was drop people out of his analyses. (See Adams Decl. ¶ 8, Exh. G, at 9, Ward Appendix Table 4; Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 399-402.) First, he excluded the 39% of class members and 34% of non-class members who had only one anniversary date after they returned from leave, and then he excluded an additional 25% of both class members and non-class members who had only two anniversary dates after they returned from leave. (See Adams Decl. ¶ 8, Exh. G, at Ward Appendix Table 4.) In other words, all Dr. Ward did was slice the workforce into smaller and smaller samples, ultimately studying only 36% of the class and 40% of the non-class. (See *id*.) This "modification" utterly fails to respond to the crux of Dr. Lanier's criticism and contributes to the unreliability of Dr. Ward's results.

2. Dr. Johnson's Analyses and Opinions Are Not Applied Reliably to the Facts in This Case

Dr. Johnson's erroneous assumptions and flawed methodology likewise render his analyses unreliable and inadmissible. First, like Dr. Ward, he incorrectly defined a cumulative effect on compensation as a pure "leave effect" by failing to study the impact of maternity leave on the compensation of class members separately from the impact of non-maternity leave on the compensation of non-class members. Second, Dr. Johnson studied a very limited period after leave, thus ignoring what happens to compensation and why for several years beyond the leave. Third, Dr. Johnson's primary "scenario" defining the before-leave and after-leave periods studied was unreliable in that it failed to compare similarly-situated individuals (and all of his scenarios are confusing). Fourth, Dr. Johnson failed to use an appropriate, reliable methodology for a Title VII case – regression analysis – in favor of descriptive, uncontrolled analyses. Fifth, to the extent Dr. Johnson did employ regression analyses, the results are unreliable because he inappropriately included a gender control.

a. Dr. Johnson Fails To Separate a Class Effect from a Leave Effect

Dr. Johnson admits that he used only one leave duration variable in his regression analyses, rather than attempting to differentiate compensation effects due to maternity leave from compensation effects due to non-maternity leave. (See Johnson Dep. at 328 (testifying that he had no "reason to believe that the leave duration effect might be different for class members than it is for non-class members" and that he "didn't test that question").) As explained above, Dr. Lanier did test that question and he found compensation disparities disfavoring class members. Dr. Johnson's unreliable use of only one leave duration variable thus renders his analysis inadmissible.

b. Dr. Johnson Ignores Years of Compensation Information Following Leave

All of Dr. Johnson's "before leave" and "after leave" scenarios are limited in time and the longest total period studied is three-and-a-half years (eighteen months before leave to two years after leave). (See Adams Decl. ¶ 11, Exh. J, at ¶ 22-24.) Dr. Johnson therefore completely ignored any possible effects a class member might suffer later than twelve or twenty-four months after her return from leave. (See Adams Decl. ¶ 14, Exh. M (Johnson Dep.) at 112; 362.) Thus, like Dr. Ward, Dr. Johnson ignored factors that influence compensation beyond a leave, such as class status.

c. Dr. Johnson's "Scenario 1" Fails To Compare Similarly-Situated Individuals

To the extent a statistical expert fails to compare similarly-situated individuals in a discrimination case, that expert by definition fails to use reliable methodology or assist the jury in answering the question at hand. *See Raskin v. Wyatt Co.*, 125 F.3d 55, 67 (2d Cir. 1997) (expert's statistical report lacked probative value and was held inadmissible because expert compared employees with counterparts in the general population but did not account for certain characteristics of those counterparts that rendered that group an unrepresentative sample).

Many of Dr. Johnson's result tables used Scenario 1 as their premise. (See Adams Decl. ¶ 10, Exh. I, at Exhibits 2-3, 5-8). As described above, Dr. Johnson's Scenario 1 compared the compensation growth of class members from a point "twelve months before six months before" the ***birth*** of a class member's child to a point twelve months after the class member returned from leave, to the compensation growth of non-class members from a point twelve months before the start of a ***leave*** to a point twelve months after return from leave. Scenario 1 is biased by its very construction and fails to compare similarly-situated employees. The "before"

window in Scenario 1 is determined based on birth dates for class members. But non-class members have no birth dates from which to calculate leave windows; therefore, the start of the "before" window for non-class members is twelve months before ***leave.*** Using different triggers in time as Johnson does means that the "before" period Johnson studies is always static at twelve months for non-class members but is variable for class members. (See Adams Decl. ¶ 14 Exh. M (Johnson Dep.) at 126.) Further, by definition, the "before" period for class members is always longer than twelve months. (See *id*. at 174-75.) Put differently, the "before" window always starts farther back in time for class members relative to their "after" window than it does for non-class members. (See *id*.) By extension, the time period over which the compensation change is being measured is always longer for class members than for non-class members. (See *id*.; see also Adams Decl. ¶ 3, Exh. B, at ¶ 13.) Dr. Johnson's Scenario I comparisons thus overstate the difference between the "before" and "after" compensation changes for the average class member compared to the "before" and "after" compensation changes for the average non-class member, and thus present inappropriate and biased comparisons. (See *id*. at ¶¶ 13-14.)

Dr. Johnson's Scenario 1 will mislead the jury into believing that he properly compares class members to similarly-situated non-class members, when he does not. Dr. Johnson's scenario presents the sort of "apples and oranges" comparison that is routinely rejected as irrelevant and inadmissible. *See Baker v. Urban Outfitters, Inc.*, 254 F. Supp. 2d 346, 355 (S.D.N.Y. 2003) (by using a pricing method associated with one fee type to calculate damages for a completely different fee type, the expert engaged "in the sort of 'apples and oranges' comparison that has been rejected in the past as irrelevant . . . and in which the [expert] witness has not applied principles and methods reliably to the facts of this case") (citations omitted). Dr. Johnson's Scenario 1 is confusing and misleading at best, and utterly unreliable at worst.

d. Dr. Johnson's Uncontrolled, Descriptive Statistics Are Essentially Worthless

Dr. Johnson's reports describe very few multiple regression analyses. In fact, Dr. Johnson spent more than nineteen pages in his initial report describing "analyses" that were simply descriptive numbers -- they failed to compare two groups while controlling for various factors. (See Adams Decl. ¶ 10 Exh. I, at 1-20.) In Dr. Johnson's reply report, he similarly described many analyses that used no controls at all and therefore made no attempt to compare similarly-situated employees. (See Adams Decl. ¶ 11, Exh. J, Exhibits 1, 2, 5, 6, 9, 10, 13, 14, 17, 18, 21, 22, 25, 26, 30, 31, 34, 35, 47, 48.)

As discussed above, parties typically use multiple regression analyses in discrimination cases. *See Ottaviani v. State Univ. of New York,* 875 F.2d 365, 366-367 (2d Cir. 1989). For example, in *Smith v. Xerox,* the plaintiff's expert grouped employees into work-groups and attempted to test whether age or gender bias affected the selection of employees in a reduction in force. 196 F.3d 358 (2d Cir. 1999). The Second Circuit affirmed the district court's ruling that the expert should have conducted multiple regression analyses to control for performance evaluations and other possible non-discriminatory causes. *See also Fahmy v. Duane Reed, Inc.*, 04 CIV 1798 (DLC), 2006 U.S. Dist. LEXIS 37703 (S.D.N.Y. June 12, 2006) (lists of managers that did not control for any factors, such as education, previous experience, or performance evaluations, that might explain part or all of the observed disparity not probative of disparate treatment); *Bonton v. City of New York,* 03 Civ. 2833 (SAS), 2004 U.S. Dist. 22105, at *14 (S.D.N.Y. Nov. 3, 2004) ("To determine whether there is a causal link between race and the observed disparity in [the rates at which children are remanded to state custody], it is necessary to conduct a multiple regression analyses to control for explanatory variables such as parents'

income level or employment status;" since expert failed to do so, testimony would only confuse, rather than assist, the trier of fact.).

For similar reasons, statistical analyses that fail to control for the major variables that affect the outcome being studied are routinely rejected as inadmissible. In *Bickerstaff v. Vassar College*, the plaintiff's expert conducted a multiple regression compensation analysis that controlled for some employment-related factors but did not control for the "major variables," including scholarship, teaching and service, all of which Vassar College considered in setting compensation increases for professors. 196 F.3d 435, 448-50 (2d Cir. 1999). The Second Circuit affirmed the district court's ruling that this flaw in the expert's statistical methodology "rendered it of no probative value to the issue of race or sex discrimination" and therefore inadmissible. *Id*. at 449-450; *see also Raskin,* 125 F.3d at 67-68 (affirming exclusion of expert's statistical report because it failed to account for other possible causes and because expert failed to account for differences among employees studied); *Freeland v. AT&T,* 238 F.R.D. 130, 148-49 (S.D.N.Y. 2006) (largely uncontrolled regression analysis inadmissible because it is "essentially worthless"). Dr. Johnson's descriptive, uncontrolled statistics are similarly worthless and are inadmissible.

e. Dr. Johnson's Regression Analyses Are Flawed Because He Uses a Gender Control

Dr. Johnson inappropriately controlled for gender in the few regression analyses he did perform. He did so essentially because that is what labor economists usually do in wage analyses. (Adams Decl. ¶ 14, Exh. M (Johnson Dep.) at 187-88, 373, 379.) He apparently does not understand or appreciate how this case differs from the usual gender discrimination case: in this case, the class includes pregnant women and new mothers, and other women are included in the non-class group along with men. Neither Dr. Ward nor Dr. Lanier included a gender control

in their regression analyses because they both understand that in this case, the class members (all women who were pregnant and/or took maternity leave) are compared to non-class members (both men and women). (Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 140-141; Adams Decl. ¶ 12, Exh. K (Lanier Dep.) at 131-32.) By adding a gender control, Dr. Johnson effectively compared female class members only to other female non-class members and not to male non-class members. (Adams Decl. ¶ 12, Exh. K (Lanier Dep.) at 131-32.)

In fact, Dr. Johnson acknowledged in his deposition that the average salary and intended EEC grant values for male non-class members are higher than those of female non-class members. (Adams Decl. ¶ 14, Exh. M (Johnson Dep.) at 138, 152-153). In other words, Bloomberg compensates men more than it compensates women. Dr. Johnson's use of a gender control variable causes the predicted compensation outcomes for male non-class members to be artificially lowered, and precludes any possibility of a direct comparison between male compensation outcomes and female compensation outcomes. (Adams Decl. ¶ 3, Exh. B, at ¶ 16.)

In *Raskin*, the Second Circuit affirmed the district court's exclusion of a statistical report in an age discrimination case because the expert compared employees to the general population without taking into account that the comparison group included people without pension plans and the self-employed – categories of people who tend to work longer and to an older age than people who work for companies with pension plans. 125 F.3d at 67. As a result, the expert's method artificially inflated the average retirement age in the general population comparison group and rendered that group an unrepresentative sample for comparison. *Id*. Likewise, here, the effect of Dr. Johnson's gender control is to deflate the predicted compensation outcomes for male employees by the difference between males and females, so that there is no direct comparison between female class member compensation outcomes and male non-class member

compensation outcomes. (See Adams Decl. ¶ 3 Exh. B, at ¶ 16.) Tellingly, Dr. Johnson did not run any of his regression analyses without the gender control to test Dr. Lanier's criticism, even though he attempted to incorporate most of Dr. Lanier's other criticisms into his analyses in an effort to show that the results were unaffected.

Including the gender control constitutes a serious methodological flaw that further detracts from the reliability of Dr. Johnson's analysis. In *EEOC v. Local 638 & Local 28 of Sheet Metal Workers' Int'l Ass'n.*, 2005 U.S. Dist. LEXIS 5953, at *25-*26 (S.D.N.Y. Apr. 8, 2005), Local 28 argued that it should not be held in contempt for continued violations of court-imposed orders to remedy more than 30 years of race discrimination. In support of its argument, Local 28 offered a statistical expert report that suggested that new non-discriminatory variables accounted for statistically significant disparities between hours worked by similarly situated white and non white journeypersons. *Id*. at 18-25. The court rejected the expert's conclusions because he included race as a variable in his statistical model, "even though doing so means that the model itself accounts for any differences between race." *Id*. at 25. The court ruled that the expert's model was "little more than a mathematical tautology whereby the results are skewed by incorporating discrimination directly into the model." *Id*. at 25-26. Because male Bloomberg employees are undisputedly paid more than female Bloomberg employees, Dr. Johnson's similarly skews his results incorporating a gender variable into his regression analyses, and all of his regression analyses should be excluded because they do not reliably support the conclusions he reports.

II. Even If Admissible Under Federal Rule of Evidence 702, Dr. Ward's and Dr. Johnson's Expert Opinions Should Be Excluded Under Federal Rule of Evidence 403 for Being Confusing and/or Misleading

Even if Dr. Ward's or Dr. Johnson's expert testimony were admissible under Fed. R. Evid. 702, this Court should still exclude their testimony because any probative value of their opinions is outweighed by confusion of the issues or misleading the jury. Fed. R. Evid. 403; *see also United States v. Mahaffy*, No. 05-CR-613 (S-3) (ILG), 2007 U.S. Dist. LEXIS 30077, at *11-*14 (E.D.N.Y. Apr. 24, 2007) (expert testimony about "industry practice" would be irrelevant, confusing and misleading to the jury and provide no help in understanding the evidence or determining facts at issue). For all the reasons described above, both experts' fundamental failure to study the question of class treatment versus non-class treatment (through their failure to give separate effect to maternity leave and their misleading definitions of a "leave effect" on compensation) renders their conclusions irrelevant, confuses the issues, and would only mislead the jury in assessing the facts at issue in this case.

Additionally, Dr. Johnson's "scenarios" are extremely confusing and their probative value is substantially outweighed by the danger of confusing both the issues and the jury. His Scenario 1 is so confusing that even Dr. Johnson himself could not accurately describe it in his deposition. He first described the additional time added to the window for class members as three months longer than the twelve-month window he used for non class members, then he testified that it was six months longer than the twelve-month window used for non-class members. (See Adams Decl. ¶ 14, Exh. M (Johnson Dep.) at 172-174.) Neither is correct: what Dr. Johnson actually did was add a variable amount of time to the window for each class member that ranged from zero to six months before a class member's maternity leave began, depending on when the birth occurred relative to date she went out on maternity leave. (See Adams Decl. ¶

3, Exh. B, at n.7.) Even if admissible, Dr. Johnson's highly confusing and misleading "scenario" comparisons should not be admitted into evidence.

Similarly, Dr. Johnson's non-regression results (currently presented in a dizzying 20 different tables in Dr. Johnson's reply report, each of which presents only a narrow piece of the puzzle) would serve only to confuse and/or mislead a jury as to how those results relate to the question of whether Defendant discriminates against pregnant women and mothers. Finally, Dr. Johnson's regression analyses that contain a gender control (*i.e.*, all of them) would confuse and/or mislead a jury by suggesting that such a control renders the compared groups more "apples to apples" when instead, introduction of the gender control only injects admitted discrimination against women into the equation.

III. In the Alternative, Only One of Defendant's Statistical Experts Should be Allowed to Present Opinions to Avoid Needlessly Cumulative Evidence

Although Drs. Ward and Johnson used somewhat different methodologies, they studied the same question and reached the same conclusion. (See Adams Decl. ¶ 6, Exh. E, at 18; Adams Decl. ¶ 13, Exh. L (Ward Dep.) at 44; Adams Decl. ¶ 10, Exh. I, at ¶ 10; Adams Decl. ¶ 11, Exh. J, at ¶ 43; Adams Decl. ¶ 14, Exh. M (Johnson Dep.) at 32-33.) Allowing two statistical experts to opine on behalf of Bloomberg would result in needlessly cumulative evidence, and this Court has the discretion under Fed. R. Evid. 403 to exclude such evidence.

Courts routinely decline to allow parties to put forward multiple expert witnesses when the experts' testimony relate to the same issues. In *Williams v. County of Orange*, the defendant proffered the testimony of two experts in the same field. No. 03 Civ. 5182 (LMS), 2005 U.S. Dist. LEXIS 46051 (S.D.N.Y. Dec. 13, 2005). Plaintiffs moved to preclude testimony from the second expert on the grounds that the second expert's proposed testimony related to the same issues as the proposed testimony of the primary expert and the conclusions reached by both

experts were essentially the same. *See id*. at *19-*20. The court agreed, ruling that the primary effect of the second expert's testimony would be to buttress the first expert's testimony, and therefore it was cumulative and inadmissible under Fed. R. Evid. 403. *Id*. at *20-*21; *see also Mengele v. Patriot II Shipping Corp.*, No. 99 Civ 8745 (LTS) (KNF), 2002 U.S. Dist. LEXIS 2550, at *5 (S.D.N.Y. Feb. 19, 2002) (second physician expert's testimony needlessly cumulative and inadmissible when plaintiff had a primary physician expert witness); *United States v. Walker*, 910 F. Supp. 861, 863 (N.D.N.Y. 1995) (additional expert testimony that buttresses the conclusions of a primary expert is cumulative and inadmissible: a party is not allowed to make its case "through the sheer weight of successive expert testimony"). Dr. Ward's and Dr. Johnson's testimony are similarly cumulative and only one statistical expert, if any, should be allowed to opine for Bloomberg.

CONCLUSION

For the foregoing reasons, EEOC respectfully requests that the Court exclude as inadmissible the expert opinions and testimony of Dr. Michael P. Ward and Dr. John H. Johnson, IV. In the alternative, EEOC requests that only one statistical expert be permitted to present opinions on behalf of Defendant in this matter.

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Respectfully submitted,

EQUAL EMPLOYMENT OPPORTUNITY COMMISSION

/s/

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